

Title (en)

METHOD FOR PRODUCING GALVANIZED STEEL SHEET FOR HOT STAMPING, ALLOYED HOT-DIPPED GALVANIZED STEEL SHEET FOR HOT STAMPING AND THE USE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES GALVANISIERTEN STAHLBLECHS FÜR HEISSPRÄGUNG, LEGIERTES FEUERVERZINKTES GALVANISIERTES STAHLBLECH FÜR HEISSPRÄGUNG UND DIE VERWENDUNG

Title (fr)

PROCÉDÉ DE PRODUCTION D'UNE TÔLE D'ACIER GALVANISÉE, DESTINÉE À L'ESTAMPAGE À CHAUD, TÔLE D'ACIER ALLIÉ GALVANISÉE PAR IMMERSION À CHAUD ET LA UTILISATION

Publication

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Application

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Abstract (en)

[origin: EP2843077A1] Provided is a method for producing a plated steel sheet with high Si content for hot stamping, which is capable of suppressing the generation of unplated portions, while maintaining high bonding strength in a welded part in cases where a galvanized steel sheet containing a large amount of Si, namely, 0.7% or more of Si is used for hot stamping applications. In this production method, a hot-rolled pickled steel sheet or cold-rolled steel sheet containing 0.10-0.5% by mass of C, 0.7-2.5% by mass of Si, 1.0-3% by mass of Mn, and 0.01-0.5% by mass of Al is annealed in a reducing atmosphere and then plated, thereby producing a galvanized steel sheet for hot stamping. This method for producing a galvanized steel sheet for hot stamping is characterized in that the annealing is carried out within the range of 500 to 700°C for 30 to 270 seconds.

IPC 8 full level

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Cited by

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